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ABSTRACT

The study explores the effect of the teacher's personality on the evaluation of students. The personality concept applied here, internal vs. external control of reinforcement, has evolved out of Rotter's social learning theory; internals (I's) tend to feel that they control their own destiny while externals (E's) tend to see forces beyond their control as being factors which determine the occurrence of reinforcement. Female fourth, fifth, and sixth grade teachers were subjects for the experiment and were classified as internal or external on the basis of their scores on Rotter's (1966) I-E Scale. After observing a video-tape of a boy performing Crandall's (1963) angle-matching task in either an ascending or descending pattern, they evaluated him as to performance recall, performance prediction, intellectual quotient, and academic achievement. Both internal and external teachers exhibited a primary effect on performance recall. The findings suggest that teachers may be influenced more by a student's initial performance than by more recent performance on his part. (Author/SES)

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THE EFFECTS OF LOCUS OF CONTROL AND PATTERN OF PERFORMANCE ON TEACHER'S EVALUATION OF A STUDENT

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ABSTRACT

Female fourth, fifth, and sixth grade teachers were classified as internal or external on the basis of their scores on Rotter's (1966) I-E Scale. After observing a video-tape of a boy performing Crandall's (1963) angle-matching task in either an ascending or descending pattern, they evaluated him as to performance recall, performance prediction, intellectual quotient, and academic achievement. Both internal and external teachers exhibited a primacy effect on performance recall.

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Female fourth, fifth, and sixth grade teachers were classified as internal or external on the basis of their scores on Rotter's (1966) I-E Scale. After observing a video-tape of a boy performing Crandall's (1963) angle-matching task in either an ascending or descending pattern, they evaluated him as to performance recall, performance prediction, intellectual quotient, and academic achievement. Both internal and external teachers exhibited a primacy effect on performance recall.

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INTRODUCTION

A number of recent studies in education have suggested that the influence process in the teacher-student relationship may be a function of teachers' "expectancies" and that this may alter the students' academic performance. It is suggested that students who are expected to perform well are apparently subject to different teaching behaviors and as a result perform better on school related tasks than students who are not expected to perform as well. Little attention has been given, however, to the question of how expectations of the intellectual ability of a student are developed in a teacher-student relationship.

It seems reasonable that teachers' expectations may be dependent on inferences derived from the perception of students' actual academic performance or more specifically, from students' pattern of performance. Thus, while some students may regress in their rate of school performance, others may make progressive improvement. It may be that such patterns of students' intellectual performance predictably influence the formation and development of teachers' expectations. Common sense might suggest that teachers would be sensitive to students' improvement which implies that teachers' expectations are higher for students who improve than for those students who do not improve but who, in fact, regress in their school performance.

Social psychologists have dealt with various aspects of the problem of how persons gain information and knowledge of other persons and derive meaning and understanding from their observable behavior under such topics as "person perception", "social perception", and "impression formation" (Brown, 1965; Heider, 1958; Secord and Backman, 1964). However, the development of intellectual expectations as a result of perceiving different patterns of intellectual performance has only recently been investigated (Jones, Rock, Shaver, Goethals, and Ward, 1968).

The findings of the Jones et al. (1968) studies seem to contradict the commonly held assumption that teachers are aware of their students' progressive improvement in school related performance. The approach to the study of causation based on the work of such social psychologists as Heider (1958) and Jones and Davis (1965) stresses the stimulus conditions or environmental factors that influence the formation of attributions. Another means of studying psychological causation has evolved from the research of Crandall, Katkovsky and Preston (1962) and Rotter (1966), which emphasizes the relationship between individual differences in perceived causation, or "internal versus external" control of events.

One aspect of personal causation which seems relevant to this discussion is Rotter's (1966) concept of locus of

control. This personality concept, internal vs. external control of reinforcement, has evolved out of social learning theory (Rotter, 1954). Internals (I's) tend to feel that they control their own destiny, while external (E's) tend to see forces beyond their control as being the factors which determine the occurrence of reinforcements (Lefcourt, 1966; Rotter, 1966).

Having experienced a greater degree of personal causation in their own life internally controlled persons (I's) could be expected to perceive the performance of others differently than externally controlled persons (E's). It follows then from the personal knowledge model of deCharms (1968) that I's more than E's, could be expected to perceive others as they perceive themselves rather than be concerned with external factors. Moreover, I's might tend to interpret the sequence of benaviors of another person as patterns of causal relations and thus manifest an apparent recency effect. The primacy effect noted by Jones, et. al. (1968) would be expected to occur for E's. E's always showed the primacy effect in predicting future performance of a person or in recalling the performance and I's tended to show a recency effect in a recent study by Bartel (1970).

The previous studies with the I-E Scale have not attempted to apply this personality dimension to teachers and relate it to their perception of a student's performance.

Bartel (1970) had internal and external female graduate students in education observe each other performing tasks and then rate each other. The present study is an extension of Bartel's (1970) work and an application of its design to a situation more closely approximating a classroom situation.

METHOD

Subjects and Design

The experimental Ss were 40 female fourth, fifth, and sixth grade school teachers who were paid for their participation. The mean score on Rotter's I-E Scale for those Ss who participated in all phases of the study was 6.58, while the median was 6.5. Ss obtaining scores below 6.5 on the scale (range 2 to 6, $\bar{x}$ = 4.20, SD = 1.29) were designated as internally controlled (I's); Ss obtaining scores above 6.5 on the scale (range 7 to 14, $\bar{x}$ = 7.95, SD = 2.06) were designated as externally controlled (E's).

All I's and E's were randomly assigned to one of the two performance pattern conditions, ascending (A) or descending (D). This resulted in ten Ss being assigned to each of the four cells in a 2 x 2 factorial design involving Ss as internal (I) or external (E) and performance pattern of the boy as ascending (A) or descending (D).

A fifth grade boy serving as an accomplice was videotaped while performing an angle-matching task (Crandall, 1963) in both the ascending and descending conditions. This resulted in two different videotapes. The same adult male served as experimenter on the videotapes, as well as in the administration of other aspects of the experiment.

Measures

Locus of Control: Rotter's (1966) Internal-External Control Scale (I-E) was used to obtain the measures of locus of control. This scale is a 29-item forced-choice test which includes six filler items intended to obscure the purpose of the test. Research using the I-E Scale has been extensive and is reported along with reliability data by Rotter (1966), Lefcourt (1966), Hersch and Scheibe (1967), Throop and McDonald (1971), and Joe (1971).

Performance Recall: Performance recall (PR) scores were obtained from item 2 of the questionnaire for teachers. A PR score for a teacher represents the number of figures she thought the student had been able to match correctly.

Performance Prediction: Performance prediction (PP) scores were obtained from item 3 of the questionnaire for teachers. A PP score for a teacher represents how many figures she thought the student would be able to match correctly if given a chance to work on a similar set of 30 figures of equal difficulty.

Intelligence Quotient Evaluation: Intelligence Quotient Evaluation (IQE) scores were obtained from item 4 of the questionnaire for teachers. An IQE score for a teacher represents her estimation of the student's intellectual ability (IQ).

Academic Achievement Evaluation: Academic achievement evaluation (AAE) scores were obtained from item 5 of the questionnaire for teachers. An AAE score for a teacher represents her estimate of the student's academic achievement (letter grade) in school.

Other Measures: The questionnaire for teachers included item 1 as a means of determining whether or not Ss thought the angle-matching task was highly related to achievement as stated in their instructions. A teacher's score indicated whether she thought the angle-matching task was a poor, good, or excellent predictor of achievement.

Procedure

The Ss were admitted to a viewing room in small groups. The E handed them an instruction sheet and informed them as they entered that there was to be no talking during the showing of the videotape or afterward. The Ss were seated in such a manner that they were not close enough to each other to see what any other person was writing.

The Ss then viewed one of the two videotapes of a fifth grade boy performing an angle-matching task (Crandall, 1963). One half of the Ss observed the boy in the A condition and the other half observed him in the D condition. The two performance patterns used in the experiment are illustrated in Figure 1.

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Insert Figure 1 about here

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As indicated in Figure 1, the boy was permitted to "solve" 15 of the 30 problems correctly in each performance condition, but in different sequences.

The task was a revision of one devised by Crandall (1963). The present form consisted of 36 6 x 6 inch white cards on which were drawn angles of varying degrees of acuity. Six of these cards were used as standards and were mounted on a bulletin board placed 8 feet in front of the boy. The boy's task was to match each of the remaining 30 cards to the appropriate standard as the experimenter presented these stimuli to him one by one.

Although the boy was led to believe that each of the stimulus cards matched one of the standards, none were exact matches. They all fell in size between two of the standards, and the differences between the standard's angles were barely discriminable. Finally, the apexes of all the angles on botn the standard and the stimulus cards were at slightly different points on the compass.

The experimental task was specifically chosen for its ambiguous qualities. The Ss were not able to tell from the task materials whether or not the boy actually matched the angles correctly. The E on the videotape verbally stated clearly whether each match was correct or not correct. The

results of each response were also displayed visually. In addition, each S kept her own record of the boy's performance.

After the videotape was shown E removed each Ss instruction sheet and gave each a questionnaire which contained measures of performance recall (PR), performance prediction (PP), IQ evaluation (IQE), and academic achievement evaluation (AAE).

Upon completing the questionnaire, the Ss then left the viewing room after the E has asked them not to discuss the experiment with anyone for the next few weeks.

RESULTS

Two-way multivariate analyses of variance were performed on the data from the questionnaire for teachers. The results from these analyses of variance were examined to determine the effect of teachers' locus of control (I-E) and student's performance condition (A-D) on the dependent variables: performance recall (PR), performance prediction (PP), IQ evaluation (IQE), and academic achievement evaluation (AAE).

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Insert Table 1 about here

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From Table 1 it is clear that there was a main effect for performance condition (A-D) for PR ($F = 12.44$, $df = 1/3$, $p < .01$). There were no other main effects nor were any of

the interactions between teachers' locus of control (I-E) and students' performance condition (A-D) significant.

As predicted E's showed a primacy effect by rating the student higher in the D performance condition than in the A performance condition on PR ($t = 2.89$, $df = 18$, $p < .01$). On the same criteria I's showed an unexpected primacy effect also ($t = 2.68$, $df = 18$, $p < .05$). These appear in Table 2.

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Insert Table 2 about here

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For the other three criteria, PP, IQE, and AAE, E's did not rate the student significantly higher in the D performance than in the A performance condition. Nor did I's rate the student significantly higher in the A performance than in the D performance condition for an expected recency effect on any of the criteria. In a more recent study the authors have obtained the same results with male teachers.

DISCUSSION

These findings suggest that teachers may be influenced more by a student's initial performance than by more recent performance on his part. A student who performs well early on a series of tasks or problems may be viewed more favorably by teachers than a student who shows improvement in his work

by performing better as he progresses on tasks. Thus a student may actually regress in his school work but be evaluated higher than a student who has progressed and demonstrated improvement. This conforms to early findings by Asch (1946) on the influence of initial information.

Perhaps performance pattern is a factor in the formation and development of a teacher expectancy for a child. The findings of the study would suggest that a teacher is influenced more by the initial behavior of a child when recalling his performance. Further studies of teacher expectancy could utilize this information in their design and therefore attempt to more accurately determine the extent to wnich a student's performance pattern influences a teacher's evaluation of him.

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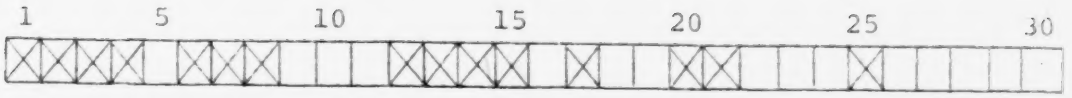
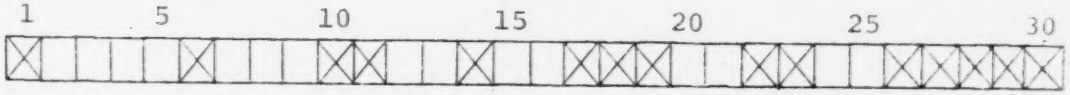


DESCENDING PERFORMANCE PATTERN (D)

Total (1-30) 15



ASCENDING PERFORMANCE PATTERN (A)

Total (1-30) 15

FIG. 1. The two performance patterns used in the experiment.

TABLE 1

Analysis of Variance Summaries for Teachers' Locus of Control (I-E) and Student's Performance Condition (A-D) on Performance Recall (PR).

Source	df	MS	F
Locus of Control (I-E) (A)	1	.62	1.08
Performance Condition (A-D) (B)	1	7.22	12.44*
A X B	1	.22	.39
Error	36	.58	

*$p < .01$

TABLE 2

Mean Scores for PR by I's and E's in the A and D Performance Condition.

		I's	E's	t^a
	A	4.8	4.4	1.20
PR	D	5.5	5.4	.29
	t^a	2.68*	2.89**	

*$p < .05$

**$p < .01$

[a]all t tests are two-tailed, df = 18